

CLAIMS

What is claimed is:

1. A disk device, comprising:
a magnetic disk for storing data;
an enclosure for containing the magnetic disk; and
a local magnetic field generator provided in the enclosure for generating a local magnetic field when the enclosure is set in an external magnetic field.
2. The disk device according to claim 1, wherein the local magnetic field generator is provided on a surface of the enclosure facing the magnetic disk, and the local magnetic field is generated from the enclosure toward the magnetic disk.
3. The disk device according to claim 1, wherein the local magnetic field has a main component parallel to a surface of the magnetic disk in an area where the magnetic disk is located.
4. A disk device, comprising:
a disk-like storage medium having a magnetic film formed on its surface; and
an enclosure case covering the disk-like storage medium and having pole pieces, one of which is a starting point of magnetic flux generation.
5. The disk device according to claim 4, wherein the disk device erases data stored in the disk-like storage medium by magnetic flux starting from one of the pole pieces when the disk device is set in an external magnetic field.

- 1 6. A disk device, comprising:
2 a magnetic disk for storing data;
3 an enclosure containing the magnetic disk; and
4 a pair of protrusions provided on a surface of the enclosure facing the
5 magnetic disk, wherein the protrusions are composed of soft magnetic material
6 formed toward the magnetic disk.
- 1 7. The disk device according to claim 6, wherein the pair of protrusions is
2 provided in a position corresponding to an inner circumference side of the magnetic
3 disk.
- 1 8. The disk device according to claim 6, wherein the enclosure includes a
2 box-like base having an opening part, and a top cover for covering the opening part of
3 the base, and the pair of protrusions is provided on the top cover.
- 1 9. The disk device according to claim 6, wherein the pair of protrusions is
2 located in a circumferential direction of the magnetic disk while maintaining a
3 predetermined gap therebetween.

1 10. A disk device for storing and reading data, comprising:
2 a magnetic disk for storing data;
3 an enclosure for containing the magnetic disk, wherein at least one surface of
4 the enclosure facing the magnetic disk is composed of soft magnetic material; and
5 a magnetic gap formed on said at least one surface of the enclosure.

1 11. The disk device according to claim 10, wherein the magnetic gap is a vacancy
2 formed in the enclosure composed of the soft magnetic material.

1 12. The disk device according to claim 11, wherein a magnetic circuit generating
2 magnetic flux toward the magnetic disk is formed around the vacancy.

1 13. The disk device according to claim 12, wherein the magnetic circuit is
2 integrally formed with the enclosure as a single piece.

1 14. A disk device, comprising:
2 a disk-like storage medium having a surface with a magnetic film having a
3 predetermined coercive force;
4 an enclosure case containing the disk-like storage medium; and
5 a magnetic field generator on a side of the enclosure case facing the disk-like
6 storage medium for forming a magnetic field with a magnetic gradient that is steeper
7 than that of an external magnetic field when the enclosure case is set in the external
8 magnetic field.

1 15. The disk device according to claim 14, wherein intensity of the magnetic field
2 formed by the magnetic field generator is stronger than the predetermined coercive
3 force of the disk-like storage medium.

1 16. A disk device for storing and reading data, comprising:
2 a magnetic disk for storing data;
3 an enclosure for containing the magnetic disk, wherein at least one surface of
4 the enclosure facing the magnetic disk is composed of soft magnetic material; and
5 a convex portion facing the magnetic disk is formed on said at least one
6 surface.

1 17. The disk device according to claim 16, wherein leakage flux from the convex
2 portion arrives farther than leakage flux from another part of said at least one surface
3 when the disk device is set in an external magnetic field.

1 18. A data-erasing method for erasing data stored in a magnetic disk in a disk
2 device, comprising the steps of:
3 generating an external magnetic field;
4 inserting the disk device into the external magnetic field; and
5 erasing data stored in the magnetic disk by generating a magnetic field with a
6 magnetic gradient that is steeper than that of the external magnetic field inside the
7 disk device.

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